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## **EMR-4000**

Software-Version: 3.0.d

TD026058EN

Protocol Implementation Conformance Statement (PICS)

UCA International Users Group Testing Sub Committee

## General

This document is applicable for EMR-4000 Version 3.0.d (Firmware-Build **29322**).

- ASCI basic conformance statement
- ACSI models conformance statement
- ACSI service conformance statement

The statements specify the communication features mapped to IEC 61850-8-1.

## ASCI basic conformance statement

The basic conformance statement is defined in Table A.1.

**Table A.1 – Basic conformance statement**

		Client/ Subscriber	Server/ Publisher	Value/ Comments
<b>Client-Server roles</b>				
B11	<b>Server</b> side (of TWO-PARTY-APPLICATION-ASSOCIATION)	—	Y	
B12	<b>Client</b> side of (TWO-PARTY-APPLICATION-ASSOCIATION)	—	—	
<b>SCSMs supported</b>				
B21	<b>SCSM:</b> IEC 6185-8-1 used	—	Y	
B22	<b>SCSM:</b> IEC 6185-9-1 used	—	N	
B23	<b>SCSM:</b> IEC 6185-9-2 used	—	Y	
B24	<b>SCSM:</b> other	—	N	
<b>Generic substation event model (GSE)</b>				
B31	<b>Publisher</b> side	—	Y	
B32	<b>Subscriber</b> side	Y	—	
<b>Transmission of sampled value model (SVC)</b>				
B41	<b>Publisher</b> side	—	N	
B42	<b>Subscriber</b> side	—	—	
— Y = supported N or empty = not supported				

## ACSI models conformance statement

The ACSI models conformance statement is defined in Table A.2.

**Table A.2 – ACSI models conformance statement**

		Client/ Subscriber	Server/ Publisher	Value/ Comments
If <b>Server or Client</b> side (B11/12) supported				
M1	<b>Logical device</b>	—	Y	
M2	<b>Logical node</b>	—	Y	
M3	<b>Data</b>	—	Y	
M4	<b>Data set</b>	—	Y	
M5	<b>Substitution</b>	—	N	
M6	<b>Setting group control</b>	—	N	
	<b>Reporting</b>			
M7	<b>Buffered report control</b>	—	Y	
M7-1	sequence-number	—	Y	
M7-2	report-time-stamp	—	Y	
M7-3	reason-for-inclusion	—	Y	
M7-4	data-set-name	—	Y	
M7-5	data-reference	—	Y	
M7-6	buffer-overflow	—	Y	
M7-7	entryID	—	Y	
M7-8	BufTim	—	Y	
M7-9	IntgPd	—	Y	
M7-10	GI	—	Y	
M7-11	conf-revision	—	Y	
M8	<b>Unbuffered report control</b>	—	Y	
M8-1	sequence-number	—	Y	
M8-2	report-time-stamp	—	Y	
M8-3	reason-for-inclusion	—	Y	

		Client/ Subscriber	Server/ Publisher	Value/ Comments
M8-4	data-set-name	—	Y	
M8-5	data-reference	—	Y	
M8-6	BufTim	—	Y	
M8-7	IntgPd	—	Y	
M8-8	GI	—	Y	
M8-9	conf-revision	—	Y	
	<b>Logging</b>	—	N	
M9	<b>Log control</b>	—	N	
M9-1	IntgPd	—	N	
M10	<b>Log</b>	—	N	
M11	<b>Control</b>	—	Y	
If <b>GSE</b> (B31/32) is supported				
M12	<b>GOOSE</b>	Y	Y	
M13	<b>GSSE</b>	N	N	
If <b>SVC</b> (41/42) is supported				
M14	Multicast SVC	—	N	
M15	Unicast SVC	—	N	
If <b>Server or Client</b> side (B11/12) supported				
M16	<b>Time</b>	Y	N	scheduled
M17	<b>File Transfer</b>	N	N	scheduled
Y = service is supported N or empty = service is not supported				

## ACSI service conformance statement

The ACSI service conformance statement is defined in Table A.3 (depending on the statements in Table A.1).

**Table A.3 – ACSI service Conformance statement**

	Services	AA: TP/MC	Client (C)	Server (S)	Comments
<b>Server</b>					
S1	ServerDirectory	TP	—	Y	
<b>Application association</b>					
S2	Associate		—	Y	
S3	Abort		—	Y	
S4	Release		—	Y	
<b>Logical device</b>					
S5	LogicalDeviceDirectory	TP	—	Y	
<b>Logical node</b>					
S6	LogicalNodeDirectory	TP	—	Y	
S7	GetAllDataValues	TP	—	Y	
<b>Data</b>					
S8	GetDataValues	TP	—	Y	
S9	SetDataValues	TP	—	Y	
S10	GetDataDirectory	TP	—	Y	
S11	GetDataDefinition	TP	—	Y	
<b>Data set</b>					
S12	GetDataSetValues	TP	—	Y	
S13	SetDataSetValues	TP	—	Y	
S14	CreateDataSet	TP	—	Y	
S15	DeleteDataSet	TP	—	Y	
S16	GetDataSetDirectory	TP	—	Y	

	Services	AA: TP/MC	Client (C)	Server (S)	Comments
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Substitution					
S17	SetDataValues	TP	—	N	

Setting group control					
S18	SelectActiveSG	TP	—	N	scheduled
S19	SelectEditSG	TP	—	N	
S20	SetSGValues	TP	—	N	
S21	ConfirmEditSGValues	TP	—	N	
S22	GetSGValues	TP	—	N	
S23	GetSGCBValues	TP	—	N	

Reporting					
Buffered report control block (BRCB)					
S24	Report	TP	—	Y	
S24-1	data-change (dchg)		—	Y	
S24-2	qchg-change (qchg)		—	Y	
S24-3	data-update (dupd)		—	N	
S25	GetBRCBValues	TP	—	Y	
S26	SetBRCBValues	TP	—	Y	
Unbuffered report control block (URCB)					
S27	Report	TP	—	Y	
S27-1	data-change (dchg)		—	Y	
S27-2	qchg-change (qchg)		—	Y	
S27-3	data-update (dup)		—	N	
S28	GetURCBValues	TP	—	Y	
S29	SetURCBValues	TP	—	Y	

Logging					
Log control block					

	Services	AA: TP/MC	Client (C)	Server (S)	Comments
S30	GetLCBValues	TP	—	N	
S31	SetLCBValues	TP	—	N	
Log					
S32	QueryLogByTime	TP	—	N	
S33	QueryLogByEntry	TP	—	N	
S34	GetLogStatusValues	TP	—	N	

Generic substation event model (GSE)					
GOOSE-CONTROL-BLOCK					
S35	SendGOOSEMessage	MC	—	Y	
S36	GetReference	TP	—	Y	
S37	GetGOOSEElementNumber	TP	—	Y	
S38	GetGoCBValues	TP	—	Y	
S39	SetGoCBValues	TP	—	N	
GSSE-CONTROL-BLOCK					
S40	SendGSSEMessage	MC	—	N	
S41	GetReference	TP	—	N	
S42	GetGSSEElementNumber	TP	—	N	
S43	GetGsCBValues	TP	—	N	
S44	SetGsCBValues	TP	—	N	

Transmission of sampled value model (SVC)					
Multicast SVC					
S45	SendMSVMessage	MC	—	N	
S46	GetMSVCBValues	TP	—	N	
S47	SetMSVCBValues	TP	—	N	
Unicast SVC					
S48	SendUSVMessage	TP	—	N	
S49	GetUSVCBValues	TP	—	N	



	Services	AA: TP/MC	Client (C)	Server (S)	Comments
S50	SetUSVCBValues	TP	—	N	

Control					
S51	Select		—	N	
S52	SelectWithValue	TP	—	Y	
S53	Cancel	TP	—	Y	
S54	Operate	TP	—	Y	
S55	Command-Termination	TP	—	Y	
S56	TimeActivated-Operate	TP	—	N	

File transfer					
S57	GetFile	TP	—	N	
S58	SetFile	TP	—	N	
S59	DeleteFile	TP	—	N	
S60	GetFileAttributeValues	TP	—	N	

Time					
T1	Time resolution of internal clock		10	—	nearest negative power of 2 in seconds
T2	Time accuracy of internal clock		N	—	T0
			Y	—	T1
			N	—	T2
			N	—	T3
			N	—	T4
			N	—	T5
T3	Supported TimeStamp resolution		10	—	nearest negative power of 2 in seconds